



ATTORNEY DOCKET
016295.0746

PATENT APPLICATION
10/055,374

2

CLAIM AMENDMENTS

IN THE CLAIMS

This listing of the claims will replace all prior versions, and listing, of claims in the application or previous response to office action:

1. (Original) A method of recovering from memory errors, the method comprising:
detecting a memory error in a section of computer memory; and
in response to detecting the memory error, instructing an operating system to discontinue use of the section of computer memory with the memory error.

2. (Original) The method of Claim 1, further comprising:
detecting multiple memory modules in a system; and
in response to detecting the multiple memory modules, creating a greater number of memory objects to represent respective sections of the multiple memory modules.

3. (Original) The method of Claim 1, wherein:
the method further comprises creating multiple memory objects to represent respective sections of computer memory; and
the operation of instructing the operating system to discontinue use of the section of computer memory with the memory error comprises sending an eject event from a basic input and output system (BIOS) to the operating system, wherein the eject event identifies the memory object that represents the section of computer memory with the memory error.

4. (Original) The method of Claim 3, further comprising:
receiving the eject event from the BIOS; and
in response to receiving the eject event, invoking an eject method to disable the section of computer memory with the memory error.

5. (Original) The method of Claim 1, further comprising using an advanced configuration and power interface (ACPI) eject control method to disable the section of computer memory with the memory error.

6. (Original) The method of Claim 1, further comprising:
identifying a good subsection and a bad subsection of the section of computer memory with the memory error;
creating a new memory object to represent the good subsection; and
instructing the operating system that the new memory object is available for use.

7. (Original) The method of Claim 1, wherein the operation of detecting a memory error comprises detecting that an error threshold has been exceeded.

8. (Original) An information handling system that automatically recovers from memory errors, the information handling system comprising:
computer memory;
a processor in communication with the computer memory;
an operating system residing in the computer memory and executable by the processor;
a basic input-output system (BIOS) residing in the computer memory and executable by the processor; and
recovery logic in the BIOS that performs operations comprising:
detecting a memory error in a section of the computer memory; and
in response to detecting the memory error, instructing the operating system to discontinue use of the section of computer memory with the memory error.

9. (Original) The information handling system of Claim 8, wherein:
the computer memory comprises multiple random access memory (RAM) modules;
the information handling system further comprises multiple memory objects that
represent respective sections of the multiple RAM modules; and
the multiple memory objects are more numerous than the multiple RAM modules.

10. (Original) The information handling system of Claim 8, wherein:
the information handling system further comprises multiple memory objects that
represent respective sections of the computer memory;
the recovery logic instructs the operating system to discontinue use of the section of
computer memory with the memory error by sending an eject event to the operating system; and
the eject event identifies the memory object that represents the section of computer
memory with the memory error.

11. (Original) The information handling system of Claim 3, wherein:
the operating system receives the eject event from the BIOS; and
in response to receiving the eject event, the operating system invokes an eject method to
disable the section of computer memory with the memory error.

12. (Original) The information handling system of Claim 8, wherein the operating
system uses an advanced configuration and power interface (ACPI) eject control method to
disable the section of computer memory with the memory error.

13. (Original) The information handling system of Claim 8, wherein the recovery logic performs further operations comprising:

identifying a good subsection and a bad subsection of the section of computer memory with the memory error;

creating a new memory object to represent the good subsection; and

instructing the operating system that the new memory object is available for use.

14. (Original) The information handling system of Claim 13, further comprising:
a memory controller in communication with the processor and the computer memory;
a memory address space that the memory controller maps to the computer memory; and
wherein the information handling system makes the new memory object available for use by causing the memory controller to add a new range of memory addresses to the memory address space.

15. (Original) The information handling system of Claim 8, further comprising:
at least first and second nodes, wherein the first node contains the processor and a portion of the computer memory, the second node contains another processor and another portion of the computer memory; and

wherein, after the recovery logic in the BIOS has instructed the operating system to discontinue use of the section of computer memory with the memory error, the first and second nodes both stop using the section of computer memory with the memory error.

16. (Original) A program product for recovering from errors in memory of an information handling system, the program product comprising:

a computer-readable medium; and

instructions encoded on the computer-readable medium, wherein the instructions, when executed by the information handling system, perform operations comprising:

detecting an error in a section of the memory; and

in response to detecting the error, instructing an operating system of the information handling system to discontinue use of the section of memory with the error.

17. (Original) The program product of Claim 16, wherein the computer-readable medium further comprises a basic input and output system (BIOS) that includes the instructions which detect the error and instruct the operating system to discontinue use of the section of memory with the error.

18. (Original) The program product of Claim 16, wherein:

the computer-readable medium further comprises instructions that create multiple memory objects to represent respective sections of computer memory;

the instructions to discontinue use of the section of computer memory with the memory error comprise an eject event; and

the eject event identifies the memory object that represents the section of computer memory with the memory error.

19. (Original) The program product of Claim 16, wherein the computer-readable medium further comprises an eject method that disables the section of computer memory with the memory error in response to the eject event.

20. (Original) The program product of Claim 19, wherein the eject method comprises an advanced configuration and power interface (ACPI) eject control method.

21. (Original) The program product of Claim 16, wherein the computer-usable medium further comprises instructions that perform operations comprising:

identifying a good subsection and a bad subsection of the section of memory with the memory error;

creating a new memory object to represent the good subsection; and

instructing the operating system that the new memory object is available for use.

22. (New) An information handling system that automatically recovers from memory errors, the information handling system comprising:

computer memory;

at least a first and second processor in communication with the computer memory;

a first node comprising the first processor and a first portion of the computer memory;

a second node comprising the second processor and a second portion of the computer memory;

an operating system residing in the computer memory and executable by the processors;

a basic input-output system (BIOS) residing in the computer memory and executable by the processors;

recovery logic in the BIOS that performs operations comprising:

detecting a memory error in one of the portions of the computer memory;

in response to detecting the memory error, instructing the operating system to discontinue use of the portion of the computer memory with the memory error; and

wherein, after the recovery logic in the BIOS has instructed the operating system to discontinue use of the section of computer memory with the memory error, the first and second nodes both stop using the section of computer memory with the memory error.